

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-94. **(Canceled).**

95. **(Previously Presented)** The method of claim 143, wherein said subject is a human.

Claims 96-139 **(Canceled).**

140. **(Currently Amended)** The method of claim 143, wherein said small molecule profiles is are obtained from said subject's tissue ~~or biological fluids~~.

141. **(Currently Amended)** The method of claim 143, wherein said small molecule profiles is are obtained using one or more of the following: HPLC, TLC, electrochemical analysis, mass spectroscopy, refractive index spectroscopy (RI), Ultra-Violet spectroscopy (UV), fluorescent analysis, gas chromatography (GC), radiochemical analysis, Near-InfraRed spectroscopy (Near-IR), Nuclear Magnetic Resonance spectroscopy (NMR), and Light Scattering analysis (LS).

142. **(Canceled).**

143. **(Previously Presented)** A method for metabolomically identifying small molecules indicative of amyotrophic lateral sclerosis, comprising:

obtaining a small molecule profile from a subject suffering from amyotrophic lateral sclerosis; and

comparing the small molecule profile from the subject to a standard small molecule profile, thereby identifying small molecules indicative of amyotrophic lateral sclerosis, wherein said small molecule profile is obtained using one or more techniques which detect 50% or more of the small molecules in said sample.

144. **(Previously Presented)** A method for metabolomically identifying small molecules indicative of Alzheimer's disease, comprising:

obtaining a small molecule profile from a subject suffering from Alzheimer's disease; and

comparing the small molecule profile from the subject to a standard small molecule profile, thereby identifying small molecules indicative of Alzheimer's disease, wherein said small molecule profile is obtained using one or more techniques which detect 50% or more of the small molecules in said sample.

**145. (Currently Amended)** A method for metabolomically identifying small molecules indicative of Huntington's disease, comprising:

obtaining a small molecule profile from a subject suffering from Huntington's disease; and  
comparing the small molecule profile from the subject to a standard small molecule profile, thereby identifying small molecules indicative of Huntington's disease, wherein said small molecule profile is obtained using one or more techniques which detect 50% or more of the small molecules in said sample.

**146. (Previously Presented)** A method for metabolomically identifying small molecules indicative of Parkinson's disease, comprising:

obtaining a small molecule profile from a subject suffering from Parkinson's disease; and  
comparing the small molecule profile from the subject to a standard small molecule profile, thereby identifying small molecules indicative of Parkinson's disease, wherein said small molecule profile is obtained using one or more techniques which detect 50% or more of the small molecules in said sample.

**147. (Previously Presented)** A method for metabolomically identifying small molecules indicative of depression, comprising:

obtaining a small molecule profile from a subject suffering from depression; and  
comparing the small molecule profile from the subject to a standard small molecule profile, thereby identifying small molecules indicative of depression, wherein said small molecule profile is obtained using one or more techniques which detect 50% or more of the small molecules in said sample.

**148. (Previously Presented)** A method for metabolomically identifying small molecules indicative of schizophrenia, comprising:

obtaining a small molecule profile from a subject suffering from schizophrenia; and

comparing the small molecule profile from the subject to a standard small molecule profile, thereby identifying small molecules indicative of schizophrenia, wherein said small molecule profile is obtained using one or more techniques which detect 50% or more of the small molecules in said sample.

149. **(Cancelled).**

150. **(Currently Amended)** The method of claim 143, wherein said small molecule profiles are is obtained from said subject's ~~blood, spinal fluid, serum,~~ cells, cellular organelles, ~~urine,~~ interstitial fluid, or saliva.

151. **(Previously Presented)** The method of claim 144, wherein said subject is a human.

152. **(Currently Amended)** The method of claim 144, wherein said small molecule profiles are is obtained from said subject's tissue ~~or biological fluids.~~

153. **(Currently Amended)** The method of claim 144, wherein said small molecule profiles is are obtained from said subject's ~~blood, spinal fluid, serum,~~ cells, cellular organelles, ~~urine,~~ interstitial fluid, or saliva.

154. **(Currently Amended)** The method of claim 144, wherein said small molecule profiles is are obtained using one or more of the following: HPLC, TLC, electrochemical analysis, mass spectroscopy, refractive index spectroscopy (RI), Ultra-Violet spectroscopy (UV), fluorescent analysis, radiochemical analysis, Near-InfraRed spectroscopy (Near-IR), Nuclear Magnetic Resonance spectroscopy (NMR), gas chromatography (GC) and Light Scattering analysis (LS).

155. **(Previously Presented)** The method of claim 145, wherein said subject is a human.

156. **(Currently Amended)** The method of claim 145, wherein said small molecule profiles is are obtained from said subject's tissue ~~or biological fluids.~~

157. **(Currently Amended)** The method of claim 145, wherein said small molecule profiles is are obtained from said subject's ~~blood, spinal fluid, serum,~~ cells, cellular organelles, ~~urine,~~ interstitial fluid, or saliva.

158. **(Currently Amended)** The method of claim 145, wherein said small molecule profiles is ~~are~~ obtained using one or more of the following: HPLC, TLC, electrochemical analysis, mass spectroscopy, refractive index spectroscopy (RI), Ultra-Violet spectroscopy (UV), fluorescent analysis, radiochemical analysis, Near-InfraRed spectroscopy (Near-IR), Nuclear Magnetic Resonance spectroscopy (NMR), gas chromatography (GC) and Light Scattering analysis (LS).

159. **(Previously Presented)** The method of claim 146, wherein said subject is a human.

160. **(Currently Amended)** The method of claim 146, wherein said small molecule profiles ~~are~~ is obtained from said subject's tissue ~~or biological fluids~~.

161. **(Currently Amended)** The method of claim 146, wherein said small molecule profiles is ~~are~~ obtained from said subject's ~~blood, spinal fluid, serum,~~ cells, cellular organelles, ~~urine,~~ interstitial fluid, or saliva.

162. **(Currently Amended)** The method of claim 146, wherein said small molecule profiles is ~~are~~ obtained using one or more of the following: HPLC, TLC, electrochemical analysis, mass spectroscopy, refractive index spectroscopy (RI), Ultra-Violet spectroscopy (UV), fluorescent analysis, radiochemical analysis, Near-InfraRed spectroscopy (Near-IR), Nuclear Magnetic Resonance spectroscopy (NMR), gas chromatography (GC) and Light Scattering analysis (LS).

163. **(Previously Presented)** The method of claim 147, wherein said subject is a human.

164. **(Currently Amended)** The method of claim 147, wherein said small molecule profiles ~~are~~ is obtained from said subject's tissue ~~or biological fluids~~.

165. **(Currently Amended)** The method of claim 147, wherein said small molecule profiles is ~~are~~ obtained from said subject's ~~blood, spinal fluid, serum,~~ cells, cellular organelles, ~~urine,~~ interstitial fluid, or saliva.

166. **(Currently Amended)** The method of claim 147, wherein said small molecule profiles is ~~are~~ obtained using one or more of the following: HPLC, TLC, electrochemical analysis, mass

spectroscopy, refractive index spectroscopy (RI), Ultra-Violet spectroscopy (UV), fluorescent analysis, radiochemical analysis, Near-InfraRed spectroscopy (Near-IR), Nuclear Magnetic Resonance spectroscopy (NMR), gas chromatography (GC) and Light Scattering analysis (LS).

167. **(Previously Presented)** The method of claim 148, wherein said subject is a human.

168. **(Currently Amended)** The method of claim 148, wherein said small molecule profiles are ~~is~~ obtained from said subject's tissue ~~or biological fluids~~.

169. **(Currently Amended)** The method of claim 148, wherein said small molecule profiles is ~~are~~ obtained from said subject's ~~blood, spinal fluid, serum,~~ cells, cellular organelles, ~~urine,~~ interstitial fluid, or saliva.

170. **(Currently Amended)** The method of claim 148, wherein said small molecule profiles is ~~are~~ obtained using one or more of the following: HPLC, TLC, electrochemical analysis, mass spectroscopy, refractive index spectroscopy (RI), Ultra-Violet spectroscopy (UV), fluorescent analysis, radiochemical analysis, Near-InfraRed spectroscopy (Near-IR), Nuclear Magnetic Resonance spectroscopy (NMR), gas chromatography (GC) and Light Scattering analysis (LS).

171. **(New)** The method of claim 143, wherein said small molecule profile is obtained from said subject's biological fluids.

172. **(New)** The method of claim 141, wherein said small molecule profile is obtained using mass spectroscopy.

173. **(New)** The method of claim 141, wherein said small molecule profile is obtained using gas chromatography (GC).

174. **(New)** The method of claim 141, wherein said small molecule profile is obtained using Nuclear Magnetic Resonance spectroscopy (NMR).

175. **(New)** The method of claim 141, wherein said small molecule profile is obtained using HPLC.

176. (New) The method of claim 143, wherein said small molecule profile is obtained from said subject's spinal fluid.

177. (New) The method of claim 143, wherein said small molecule profiles are obtained from said subject's serum.

178. (New) The method of claim 143, wherein said small molecule profile is obtained from said subject's urine.

179. (New) The method of claim 144, wherein said small molecule profile is obtained from said subject's biological fluids.

180. (New) The method of claim 154, wherein said small molecule profile is obtained using mass spectroscopy.

181. (New) The method of claim 154, wherein said small molecule profile is obtained using gas chromatography (GC).

182. (New) The method of claim 154, wherein said small molecule profile is obtained using Nuclear Magnetic Resonance spectroscopy (NMR).

183. (New) The method of claim 154, wherein said small molecule profile is obtained using HPLC.

184. (New) The method of claim 144, wherein said small molecule profiles are obtained from said subject's serum.

185. (New) The method of claim 144, wherein said small molecule profile is obtained from said subject's urine.

186. (New) The method of claim 144, wherein said small molecule profile is obtained from said subject's spinal fluid.

187. (New) The method of claim 145, wherein said small molecule profile is obtained from said subject's biological fluids.
188. (New) The method of claim 158, wherein said small molecule profile is obtained using mass spectroscopy.
189. (New) The method of claim 158, wherein said small molecule profile is obtained using gas chromatography (GC).
190. (New) The method of claim 158, wherein said small molecule profile is obtained using Nuclear Magnetic Resonance spectroscopy (NMR).
191. (New) The method of claim 158, wherein said small molecule profile is obtained using HPLC.
192. (New) The method of claim 145, wherein said small molecule profile is obtained from said subject's spinal fluid.
193. (New) The method of claim 145, wherein said small molecule profiles are obtained from said subject's serum.
194. (New) The method of claim 145, wherein said small molecule profile is obtained from said subject's urine.
195. (New) The method of claim 146, wherein said small molecule profile is obtained from said subject's biological fluids.
196. (New) The method of claim 162, wherein said small molecule profile is obtained using mass spectroscopy.
197. (New) The method of claim 162, wherein said small molecule profile is obtained using gas chromatography (GC).

198. **(New)** The method of claim 162, wherein said small molecule profile is obtained using Nuclear Magnetic Resonance spectroscopy (NMR).

199. **(New)** The method of claim 162, wherein said small molecule profile is obtained using HPLC.

200. **(New)** The method of claim 146, wherein said small molecule profile is obtained from said subject's spinal fluid.

201. **(New)** The method of claim 146, wherein said small molecule profiles are obtained from said subject's serum.

202. **(New)** The method of claim 146, wherein said small molecule profile is obtained from said subject's urine.

203. **(New)** The method of claim 147, wherein said small molecule profile is obtained from said subject's biological fluids.

204. **(New)** The method of claim 166, wherein said small molecule profile is obtained using mass spectroscopy.

205. **(New)** The method of claim 166, wherein said small molecule profile is obtained using gas chromatography (GC).

206. **(New)** The method of claim 166, wherein said small molecule profile is obtained using Nuclear Magnetic Resonance spectroscopy (NMR).

207. **(New)** The method of claim 166, wherein said small molecule profile is obtained using HPLC.

208. **(New)** The method of claim 147, wherein said small molecule profile is obtained from said subject's spinal fluid.

209. **(New)** The method of claim 147, wherein said small molecule profiles are obtained from said subject's serum.



210. (New) The method of claim 147, wherein said small molecule profile is obtained from said subject's urine.

211. (New) The method of claim 148, wherein said small molecule profile is obtained from said subject's biological fluids.

212. (New) The method of claim 170, wherein said small molecule profile is obtained using mass spectroscopy.

213. (New) The method of claim 170, wherein said small molecule profile is obtained using gas chromatography (GC).

214. (New) The method of claim 170, wherein said small molecule profile is obtained using Nuclear Magnetic Resonance spectroscopy (NMR).

215. (New) The method of claim 170, wherein said small molecule profile is obtained using HPLC.

216. (New) The method of claim 148, wherein said small molecule profile is obtained from said subject's spinal fluid.

217. (New) The method of claim 148, wherein said small molecule profiles are obtained from said subject's serum.

218. (New) The method of claim 148, wherein said small molecule profile is obtained from said subject's urine.